1. New York's Health Care Landscape

New York's total population is 19 million, making it the third most populous state in the United States. Nearly 8 percent of New Yorkers live in a rural area. Approximately 2.6 million New Yorkers are uninsured, and 23 percent are enrolled in public health insurance programs.

New York has approximately 37 commercial health maintenance organizations of which 16 participate in Medicare advantage and 23 offer Medicaid managed care. New York has a very robust managed care program for its Medicaid recipients where over two-thirds of beneficiaries receive their care through an HMO including those with disabilities and other chronic diseases.

The provider landscape includes 231 hospitals and 131 community health centers; New York State has 21 general practitioners per 100,000 people compared with 339 specialists per 100,000. According to the Medical Society of the State of New York, the 2006 adoption rate for EHRs was 18 percent for all physicians and 8 percent for physicians in small groups or in solo practices.

2. New York's State-Level HIE Efforts

Background

Since 2006, New York State has been investing in technology, operational capacity, and collaborative governance structures and processes to mobilize statewide health information exchange to improve the quality, safety, efficiency, and affordability of health care. This investment has involved not only considerable state resources – over $260 million to date – it has also inspired considerable private investment totaling almost $300 million.

A central strategic focus of New York State's efforts is to advance interoperability through the development and implementation of a shared health information infrastructure based on a community-driven model available to all providers, payers, and patients. The HIE will evolve in two layers: a statewide framework of rules and policies that facilitates exchange between multiple networks at the local level.

Important milestones include:

- In March 2005, HHS Secretary Mike Leavitt and New York Governor George Pataki announced a reform plan for New York's Medicaid program that would include, among other focus areas, investing in e-prescribing, electronic health records (EHRs), and Regional Health Information Organizations (RHIO) activities. The reform plan, known as the Federal-State Health Reform Partnership, promised to reinvest $1.5 billion of savings in federal funding for these and other purposes.

- In fall 2005, as part of the Federal-State Health Reform Partnership, the New York State Department of Health announced the availability of funds for the Health Care Efficiency and Affordability Law for New Yorkers (HEAL NY) Grant Program. HEAL NY is a multi-year, multi-phased program that supports development and investment in health IT

initiatives on a regional level. The HEAL NY phase 1 grant process provided $52 million to 26 grantees for health IT and HIE efforts.

- In fall 2006, the New York eHealth Collaborative (NYeC) was incorporated as a public-private partnership to serve as a leader and point of convergence for healthcare stakeholders across the state to build consensus on health IT policy priorities and to collaborate on implementation efforts. In January 2007, the Office of Health Information Technology Transformation (OHITT) was created to provide guidance to state and private-sector efforts to improve healthcare quality, accountability, and efficiency through widespread deployment of health IT.

- In spring 2008, New York state provided an additional $105 million to support RHIOs and other electronic health information exchange activities under the auspices of HEAL phase 5 (HEAL 5). The goal of HEAL 5 over the two year grant period from August 2008 – August 2010 is to establish and grow the organizational, clinical and technical building blocks to produce an initial flow of information among providers who are the early health IT adopters and to ensure information tools are being used effectively.

- In April 2009, the State released an RFP for HEAL 10, whose strategic focus is to continue to advance New York's health information infrastructure, based on clinical and programmatic priorities and specific goals for improving quality, affordability and outcomes. The grant also sets a foundation for health information infrastructure for a new care delivery and reimbursement model – Patient Centered Medical Home. This policy alignment will not only advance and sustain the technical building blocks of New York's health information infrastructure, but will also ensure that the clinical capacity is established for providers and patients to be prepared and held accountable for new reimbursement models based on quality based outcomes and care coordination and management.

Governance Framework

New York is developing health information policies, standards and protocols and other technical approaches governing the health IT infrastructure – collectively referred to as Statewide Policy Guidance. NYeC, in partnership with the DOH, leads the development of Statewide Policy Guidance through an open, transparent, and consensus driven process to which all contribute to ensure a comprehensive policy framework to advance health IT in the public's interest.

Key components of New York's governance framework include:

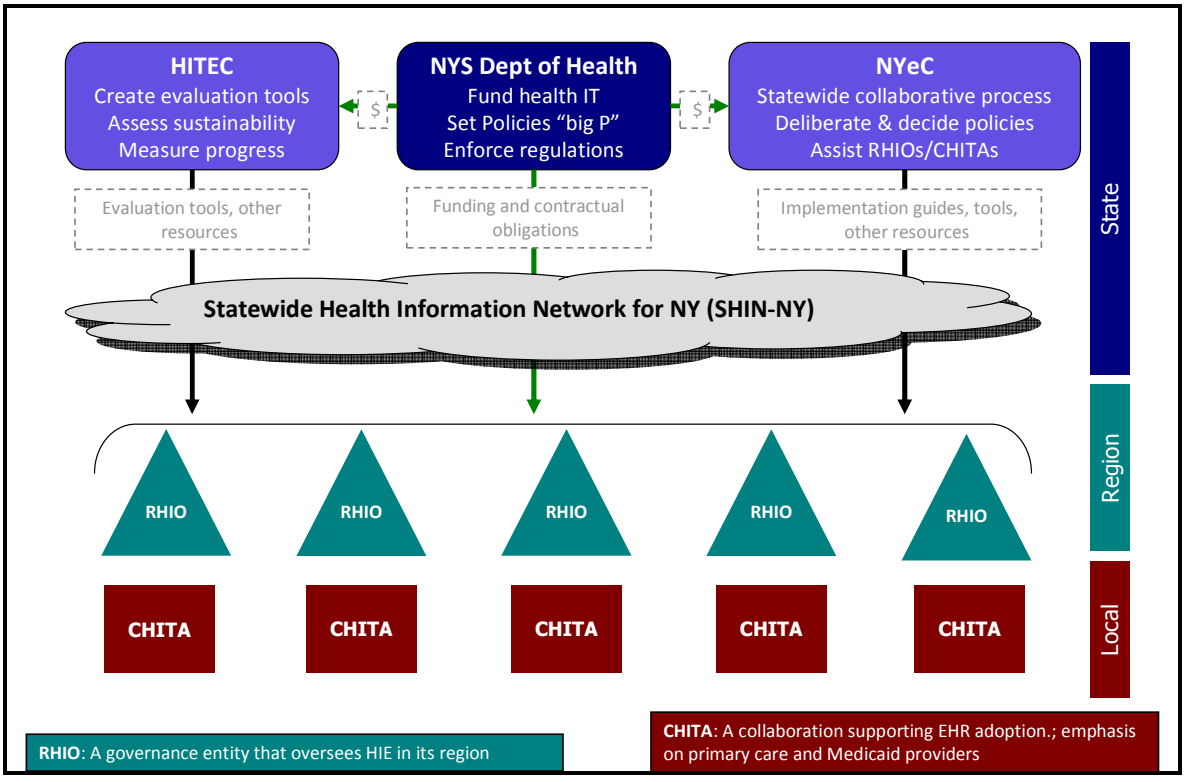
- ***New York State Office of Health Information Technology Transformation (OHITT).*** In January 2007, the New York State Department of Health created the OHITT. OHITT is charged with coordinating health IT programs and policies across the public and private health-care sectors to enable improvements in health care quality, affordability and outcomes for all New Yorkers. These programs and policies help establish the health IT infrastructure and capacity to support clinicians in quality and population health

improvement, quality-based reimbursement programs, new models of care delivery and prevention and wellness initiatives.

- ***New York eHealth Collaborative (NYeC).*** The NYeC is a statewide public-private partnership and governance body playing an integral role in advancing New York State's health IT strategy. NYeC's key responsibilities include (1) convening, educating and engaging key constituencies, including health care and health IT leaders across the state; (2) facilitating a two-tiered governance structure for interoperable health information exchange through the SHIN-NY that includes: at the state level setting health information policies, standards and technical approaches, and at the regional and local level implementing such policies by RHIOs and CHITAs; and (3) evaluating and establishing accountability measures for New York State's health IT strategy. NYeC is a state designated entity for the purposes of health information exchange infrastructure as defined in the American Recovery and Reinvestment Act 2009.

- ***Regional Health Information Organizations (RHIOs).*** At the local level, RHIOs are being created to serve as the entities that govern HIE in their regions. Funds from each of the HEAL grants have supported the creation (or expansion) of the RHIOs across the state. RHIOs will oversee the development of connections between local healthcare providers and ensure they conform to the SHIN-NY policy, privacy, and technical framework.

The illustration below highlights the relationships between the components of New York's health information infrastructure.



Supporting New York's governance model is a Statewide Collaborative Process (SCP) that is driven by the efforts of four workgroups which recommend Statewide Policy Guidance to the NYeC Policy and Operations Council, the NYeC Board and the Department of Health.

The four workgroups are: (1) Clinical Priorities (2) Privacy and Security; (3) Technical Protocols and Services; and (4) EHR Collaborative. The picture below illustrates the components of the SCP.

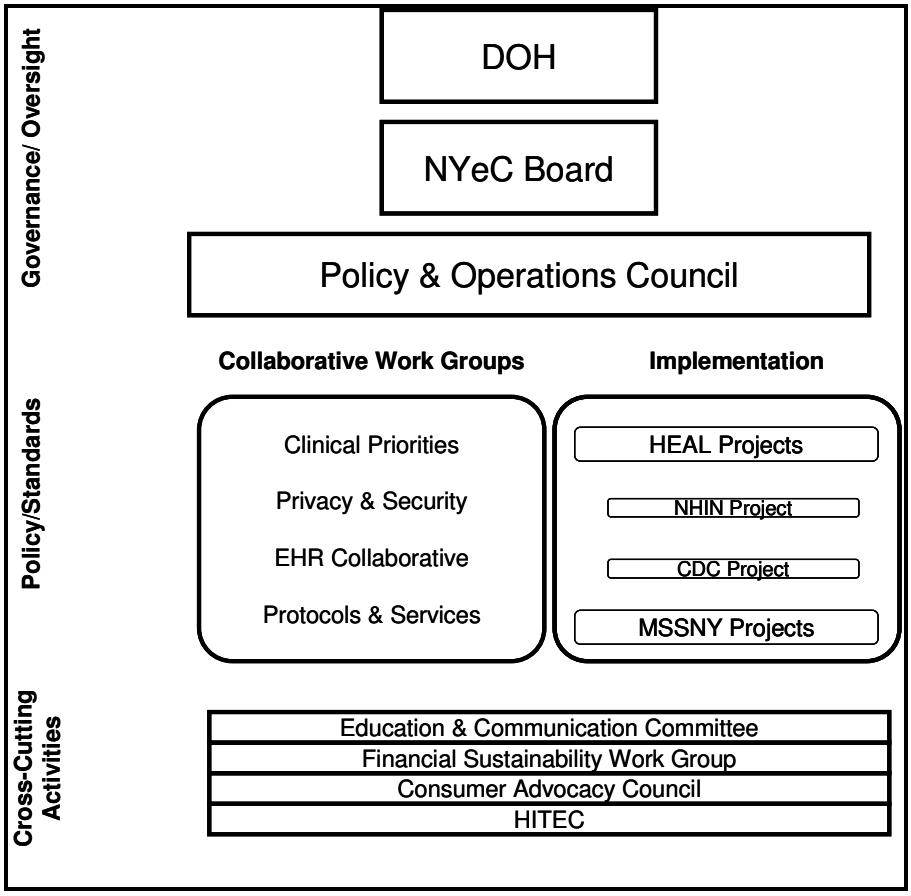


Chart 1: New York Statewide Collaborative Process

Ultimately, the Department of Health has final authority over the development and implementation of the Statewide Policy Guidance.

Adherence to the policy guidance has been achieved throughout the state by incorporating the policies in contracts between the State and the HEAL-NY recipients as illustrated by the chart on the following page.

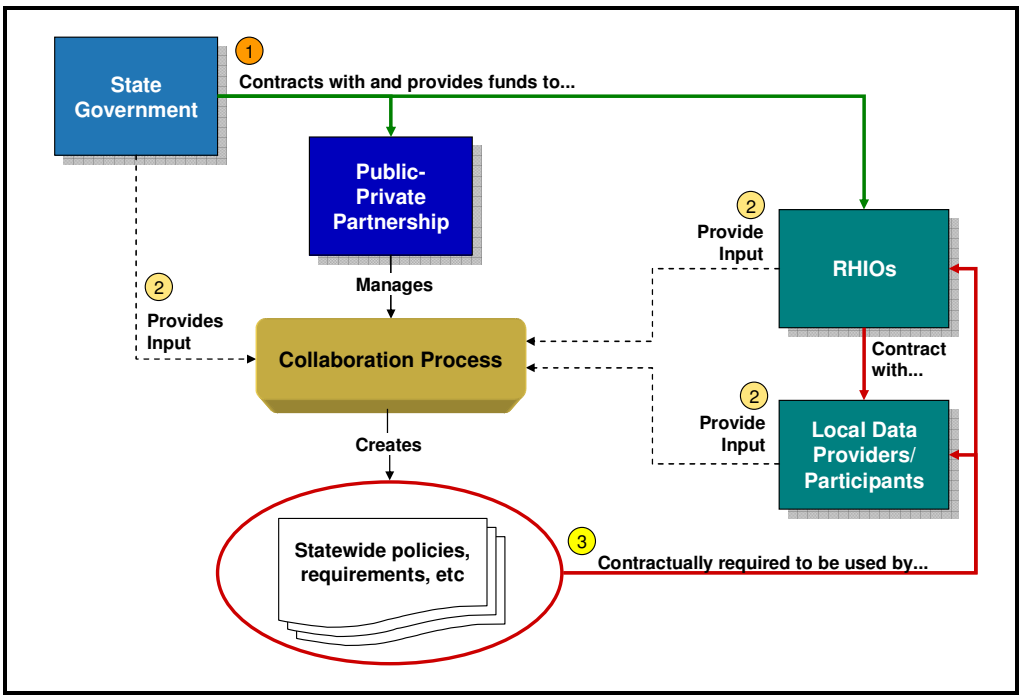


Chart 2: Flow of contracting and policy accountabilities

Privacy and Security Approach

Overview

The NYeC Privacy and Security workgroup was charged to develop policies that protect privacy, strengthen security, ensure affirmative and informed consent and support the right of New Yorkers to have greater control over and access to their personal health information as foundational requirements for interoperable Health IT.

Currently, the privacy and security policies and procedures for New York's health information infrastructure include procedures governing interoperable health information exchange via the SHIN-NY as well as interoperable EHRs. The scope includes the full range of privacy and security policies for interoperable health information exchange, including: authorization, authentication, consent, access, audit, breach and patient engagement policies. The privacy and security policies and procedures are part of the Statewide Policy Guidance.

These policies and procedures represent the minimum standards with which projects – currently RHIOs and providers participating in a CHITA – must comply and must require their participants to satisfy. All projects funded under the HEAL NY Health IT grant programs are required to comply with the privacy and security policies and procedures. In addition, all projects must require their participants to comply with the most recent version of of these policies and procedures. Where appropriate, or where required by the operational models and/or governance structures of the RHIO, a RHIO may delegate certain responsibilities set forth in the privacy and security policies and procedures to its participants. However, RHIOs and providers

participating in a CHITA remain responsible for requiring their participants to comply with the minimum policies set forth herein.

Privacy and Security Policy Summary

New York State law requires that hospitals, physicians, other health care providers and HMOs obtain consumer consent before disclosing personal health information for non-emergency treatment. Unlike HIPAA, New York State law provides no exception to this requirement for treatment, payment or health care operations. While consent may be verbal or even implied for most types of health information, this is not the case for certain classes of specially protected health care information, including information related to HIV status, mental health and genetic testing, the disclosure of which require written consent. These laws reflect a desire to ensure that consumers are protected from unauthorized uses of personal health information and provide both a legal and normative guidepost for developing consent policies for health information exchange via the SHIN-NY governed by RHIOs and interoperable EHR adoption in New York.

Accordingly, affirmative consent must be obtained by each provider and payer organization before accessing health information through the SHIN-NY governed by the RHIO. Consent may be obtained at an organizational level (i.e., medical practice, hospital) and need not be at the individual clinician level. Once a provider or payer organization obtains consumer consent, it may access the information of all RHIO data suppliers unless the RHIO has voluntarily established additional restrictions on disclosures. NYS established a statewide standardized model consent form whereby patients may authorize provider organizations to access all of their protected health information including sensitive health information.

Consumers must be able to prevent any or all provider and payer organizations from accessing their personal health information via SHIN-NY governed by a RHIO without being refused treatment or coverage. Provider or payer organizations may not condition treatment or coverage on the consumer's willingness to provide access to the consumer's information through a RHIO.

Existing New York law does not require providers to obtain consumer consent to upload or convert information to a RHIO's HIE or SHIN-NY sub network as long as the RHIO does not make the information accessible to other entities without consumer consent.

Technical Model

New York's technical framework includes three main building blocks: (1) the 3C's: EHRs for Clinicians, personal health records for Consumers, and Community information portals; 2) clinical information services which refer to the tools required for the aggregation, analysis, decision support and reporting of data for various quality and public health purposes; and (3) the Statewide Health Information Network for New York (SHIN-NY) providing an architecture, common health information exchange protocols and standards to share information among providers and with patients and mobilize information for public health and quality reporting.

Serving as the statewide health information exchange architecture, the SHIN-NY will be built and operated using common and consistent protocol and mutually-agreed upon and consistently-applied rules and standards called the Common Health Information Exchange Protocols

(CHIxP). RHIOs will participate in the development of and ensure conformance to the technical standards, security processes and privacy policies of the SHIN-NY in their designated regions.

The SHIN-NY will also include state-level services through which the regional HIEs communicate and share services, governed by RHIOs and NYeC. The regional sub-networks or HIEs and the state-level services will communicate through an architecture using web services and common health information exchange protocols. Enterprise Service Bus (ESB) platforms will be utilized as state-level services to facilitate a public registry of SHIN-NY services. ESB platforms will also be utilized at the regional sub-network or HIE level to support communication with the public registry among many possible providers and consumers of services and data.[1]

Financing

Beginning in January 2010, NYeC will receive $23.5 million from the State HIE Cooperative Agreement program to advance statewide HIE efforts over the course of three years. In addition, qualified hospitals and providers in New York will receive approximately $2.7 billion in Medicare and Medicaid meaningful use incentives over the next 11 years.

To date, New York's statewide HIE infrastructure has relied on public sector financing. Since 2005, the New York State government has committed more than $200 million to the New York health information exchange infrastructure.

New York's HIE readiness has also been advanced through federal funds from the Centers for Disease Control and Prevention (CDC) and ONC. New York received a $20 million CDC grant in 2008 to improve public health situational surveillance and reporting through health information infrastructure. In addition, NYeC received a $4.7 million contract from the U.S. Department of Health and Human Services to support the Nationwide Health Information Network (NHIN) Trial Implementations Project.

While it is anticipated that health care reimbursement reform will be used to sustain HIE operations, discussions remain in preliminary stages. In addition, the state-level HIE leadership is exploring the viability of leveraging Health Care Reform Act (HCRA) funding pools to support health IT and HIE.[2]

New York is also pursing statewide strategies to implement Pay-for-Performance. In June 2007, the New York State Department of Health awarded a total of $9.5 million in contracts to four regional pay for performance demonstration projects. The two-year projects are designed to test various ways of rewarding physicians, hospitals and clinics that provide high quality care to their

[1] Technical Discussion Document: Architectural Framework for New York's Health Information Infrastructure, NYS Department of Health. Available at: http://www.health.state.ny.us/technology/projects/docs/technical_discussion_document.pdf

[2] HCRA was initially enacted in 1996 to replace the then existing collection of provisions of the Public Health Law (PHL) applicable to State payment or reimbursement for health care services known as NYPHRM. HCRA also consists of a number of separate sections of the PHL under which a variety of payments and reimbursements to hospitals and other health care providers are made.

patients. Partnering with health plans, the awardees are designing incentives that promote system changes and improve health service delivery. Performance will be assessed using standardized measures created by organizations such as the National Committee for Quality Assurance (NCQA) and the National Quality Forum (NQF).

3. New York's Regional Health Information Organizations (RHIOs)

In New York, RHIOs serve as governance entities that oversee and enable the exchange of health information within designated geographic regions. They are multi-stakeholder collaborations with a mission of governing its use in the public's interest and for the public good by supporting improvements in health care quality, affordability and outcomes. As stewards of health information exchanged through SHIN-NY, RHIOs will be accountable to the common policies and standards that govern health information exchange.

Working under the NYeC umbrella and with their stakeholders and constituents, New York's RHIOs are responsible for health information exchange both organizationally and technically through a sound governance structure. RHIOs are a part of the Statewide Collaboration Process managed by NYeC and are required to participate in setting Statewide Policy Guidance and then implement and ensure adherence to such guidance. By virtue of fulfilling their obligations to the State, RHIOs can benefit in terms of eligibility for grants, contracts for services, and access to various data sources, both public and private.

The table below provides a high-level overview of New York RHIOs. Additional information on each project is available online at http://www.nyehealth.org/heal-awardee-summaries.

Name	Location	Stage[3]
Adirondack Health Information Exchange (ARCHIE)	Glens Falls	3
Bronx Regional Health Info Organization (Bx RHIO)	New York City	5
Brooklyn Health Information eXchange (BHIX)	New York City	5
Rochester RHIO	Rochester	4
Health Advancement Collaborative of Central NY(HAC-CNY)	Syracuse	2
Health Info Exchange of New York (HIXNY)	Albany	4
Long Island Patient Info Exchange (LIPIX)	Long Island	4
New York Clinical Info Exchange (NYCLIX)	New York City	4
Southern Tier HealthLink (STHL)	Binghamton	4
Taconic Health Info Network & Community (THINC)	Hudson Valley	6
Western New York Clinical Information Exchange (WNYCIE)	Buffalo	4

[3] This analysis utilizes the eHealth Initiative's RHIO and HIE implementation scale. Relevant stages include:
Stage 2: Getting organized; defining shared vision, goals, and objectives
Stage 3: Transferring vision, goals and objectives to tactics and business plan
Stage 4: Well under way with implementation -technical, financial and legal
Stage 5: Fully operational; transmitting data
Stage 6: Fully operational; transmitting data and have a sustainable business model
Stage 7: Expansion to encompass a broader coalition of stakeholders